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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,872	03/30/2004	Steven D. Cheng	ACMP0185USA	2871

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NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION
P.O. BOX 506
MERRIFIELD, VA 22116

EXAMINER

MEHRPOUR, NAGHMEH

ART UNIT PAPER NUMBER

2617

DATE MAILED: 04/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/708,872	CHENG, STEVEN D.	
	Examiner	Art Unit	
	Naghmeh Mehrpour	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 15 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1-17**, are rejected under 35 U.S.C. 102(e) as being anticipated Shioda et al. (US publication 2002/0183071).

Regarding claims 1, 10, Shioda teaches a method of using power measurements from base stations to calculate position of a mobile station, the method comprising; providing position coordinates for a plurality of base stations in a mobile phone network (0052), measuring Received Signal Strength levels of nearby base stations with a identifying three base stations that efficient above a predetermined threshold level for which Indicator (RSSI) level mobile station (0053, 0079-0082); identifying three base stations that have a reliability coefficient above a predetermined threshold level foe which the mobile station measures wherein the mobile station strongest RSSI levels, wherein each base station has the corresponding reliable interference effects associated with base station (0082-0083);

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the mobile station receiving the position coordinates of the three identified base stations,

calculating a curved path of possible positions of the mobile station for each of the three identified base stations according to the measured RSSI the three identified base stations; and levels of each of calculating the position of the mobile station based on the position coordinates of the three identified base stations and the three curved paths of possible positions of the mobile station (0079);

wherein when the mobile station is less than a predetermined distance away from a nearby base station in the mobile phone network, the position of mobile station is set to be equal to the position of the nearby base station (0181-0183).

Regarding claims 2, 11, Shioda teaches a method of claim 1 wherein calculating the curved path of possible positions of the mobile station for each of the three identified base stations is performed according to the relationship $RSSI \propto \frac{1}{d^2}$ wherein RSSI stands for received signal strength indicator, and the d for a measured RSSI value for an i stands for a distance between the mobile station and the i base station (0084).

Regarding claims 3, 12, Shioda teaches a method of claim 1 wherein when calculating the curved path of possible positions of the mobile station for each of the three identified base stations, a known interference coefficient for each base station is utilized to calculate an inner curve and an outer curve corresponding to that base station, the inner

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curve and the outer curve defining an individual area that the mobile station is predicted to be in (0053).

Regarding claims 4, 13, Shioda teaches a method of claim 3 wherein a merged area that the mobile station is predicted to be in on a union of the individual areas identified base stations, the merged area comprising possible calculated based from each of the three positions in which all of the individual areas overlap (0053).

Regarding claims 5, 14, Shioda teaches a method of claim 3 wherein the known interference coefficients for each of the three identified base stations comprise a mean interference value and a corresponding standard deviation value that are used to calculate the inner curve and the outer curve corresponding to the same base station (0229).

Regarding claim 6, Shioda teaches a method of claim 1 wherein each base station has a corresponding reliability coefficient due to interference effects associated with that base station, and when identifying the three base stations for which the mobile station levels, base stations measures the strongest RSSI which have a reliability coefficient below a predetermined threshold level are not selected to be one of the three base stations that the mobile station identifies as having the strongest RSSI levels (0081-0083, 0091).

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Regarding claims 7, 15, Shioda teaches a method of claim 1 wherein the mobile station receiving the position coordinates of the three identified base stations is realized by the three identified base stations transmitting their respective position coordinates to the mobile station (0125).

Regarding claims 8, 16, Shioda teaches a method of claim 1 wherein the mobile station receiving the position coordinates of the three identified base stations is realized by the mobile station reading the positions coordinates of the three identified base stations from a lookup table (0115, 0121-126, 0134).

Regarding claims 9, 17, Shioda teaches a method of claim 1 wherein when the mobile station is less than a predetermined distance away from a nearby base station in the mobile position of the mobile station is phone network, the set to be equal to the position of the nearby base station (0127-0131).

Response to Arguments

3. Applicant's arguments filed 11/15/05 have been fully considered but they are not persuasive.

In response to the applicant's argument that "*Shioda does not teach that the position of the mobile station is set to be equal to the position of the base station when the mobile is less than a predetermined distance away from the base station*", the examiner that Shioda teaches covariance matrix the respective terms σ_{xx} , σ_{xy} , σ_{yx} , σ_{yy} constituting the matrix (17) indicate a variance which has the nature of a weighting

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coefficient that adversely affects the positioning accuracy, between the base stations A, B, C and the positioning apparatus 10. Therefore, when the terms σ_{xx} , σ_{xy} , σ_{yx} , σ_{yy} have small values, this means that a resulting rough position POSI exhibits a small positioning error and a high positioning accuracy. Thus, as shown in the following equation, the value HDOP (Horizontal Dilution Of Precision) of a square root of square sum of the terms σ_{xx} , σ_{yy} is calculated, and this value HDOP is determined as a value indicative of a quantified positioning error on a horizontal coordinate plane. $HDOP = \sqrt{\sigma_{xx}^2 + \sigma_{yy}^2}$ (0170), the positioning data DPs indicative of the current position (xp,yp) of the positioning apparatus 10, which is the positioning result, is transmitted to a nearby base station to which a request is made for delivering the navi information instructed by the user. For example, when the user requests information on a map of surroundings including the current position (xp, yp) as the navi information, the nearby base station is requested to deliver map information. It is also possible to request the base station to deliver a variety of navi information such as information required for shopping such as restaurants, shops and so on located around the current position (xp, yp), amusement facilities, public facilities, sight-seeing spots, and the like (0181).

The navi information, is transmitted from the base station, the receiver section 11rx receives the delivered radio wave, and acquires the navi information from received data Drx. Then, the receiver section 11rx displays the acquired navi information, and the current position (xp, yp), which is the positioning result, on the display part 16 for provision to the user (0182). For example, as illustrated in FIG. 22A, the map

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information delivered thereto is displayed on the display part 16, and a symbol "P" indicative of the current position (xp, yp) is blinked in the map, thereby improving the convenience of the user. Also, when the value of the positioning error HDOP, which was calculated when determining the current position (xp, yp), corresponding to the current position is larger than a predetermined value, the positioning error HDOP is converted to a distance, and as illustrated in FIG. 22B, a circle Cerr centered at the current position (xp, yp) and having a radius equal to the distance converted from the positioning error HDOP is displayed. In this manner, it is also possible to allow the user to recognize to which degree the current position (xp, yp) is correct (0183).

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

5. Any responses to this action should be mailed to:

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naghmeh Mehrpour whose telephone number is 571-272-7913. The examiner can normally be reached on 8:00- 6:00.

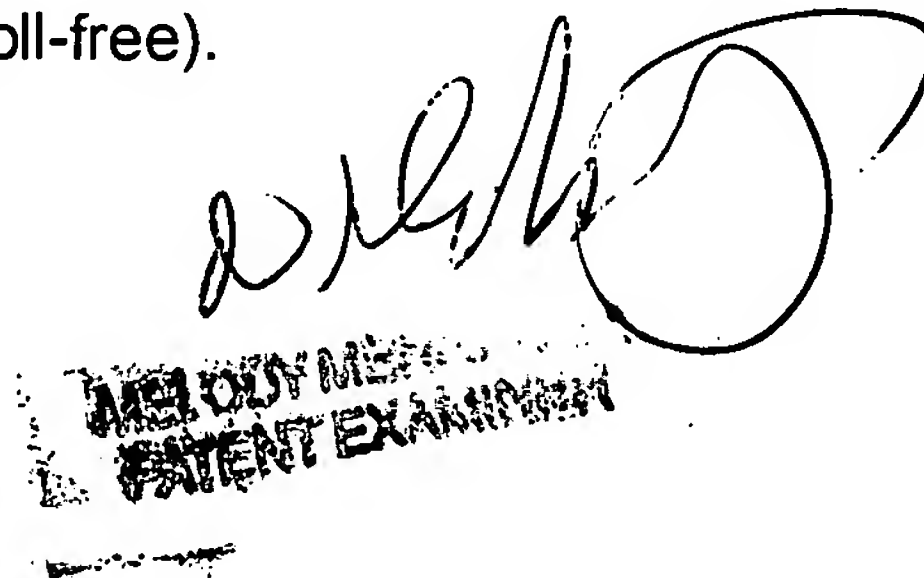
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold be reached (571) 272-7905.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NM

March 31, 2006



A handwritten signature in black ink is written over a rectangular official stamp. The stamp contains the text "MELODY MEHROU" on the top line and "PATENT EXAMINER" on the bottom line. The signature is a cursive-style name that appears to be "Naghmeh Mehrpour".